WHAT IS CLAIMED IS:

1. An auto-focus method for focusing an optical arrangement of a sub-micron optical system, the optical system including a head, at least part of the optical arrangement being included in the head, the optical arrangement being configured for reading from or writing to a surface of a medium, the head performing a scanning motion relative to the surface, the method comprising:

(a) illuminating at least part of a first viewing region of the surface by the optical arrangement;

(b) performing a focus range measurement of a second viewing region of the surface, said step of configuring and said step of performing being performed substantially at the same time, wherein a centroid of said first viewing region is offset from a centroid of said second viewing region at least in a direction which is parallel to a direction of relative motion of the medium and the head;

(c) providing relative movement between the medium and the head in order for the optical arrangement to illuminate at least part of said second viewing region; and

(d) adjusting the focus of the optical arrangement based upon said focus range measurement.

2. The method of claim 1, wherein said step of performing is performed by sending a measurement ray through at least part of the optical arrangement.

3. The method of claim 1, wherein:

(a) the optical arrangement includes a lens which is included in the head; and

(b) said step of performing is performed by sending a measurement ray through said lens.

4. The method of claim 3, wherein said measurement ray passes through an optical center of said lens.

5. The method of claim 1, wherein said first viewing region and said second viewing region are non-overlapping.

6. A sub-micron optical system for reading from or writing to a surface of a medium, comprising:

(a) an optical arrangement and a head, at least part of said optical arrangement being included in said head;

(b) a drive mechanism configured for providing relative movement between the medium and said head in a drive direction;

(c) an auto-focus measurement system; and

(d) an auto-focus mechanical system configured to adjust the focus of said optical arrangement based upon at least one focus range measurement taken by said auto-focus measurement system, wherein:

(i) said optical arrangement and said auto-focus measurement system are configured, such that, said optical arrangement illuminates at least part of a first viewing region of the surface substantially at the same time that said auto-focus measurement system performs a focus range measurement of a second viewing region of the surface; and

(ii) a centroid of said first viewing region is offset from a centroid of said second viewing region at least in said drive direction.

7. The system of claim 6, wherein said auto-focus measurement system is configured to direct a measurement ray through at least part of said optical arrangement.

8. The system of claim 6, wherein:

(a) said optical arrangement includes a lens which is included in said head; and

(b) said auto-focus measurement system is configured to direct a measurement ray through said lens.

9. The system of claim 8, wherein said auto-focus measurement system is configured to direct said measurement ray through an optical center of said lens.

10. The system of claim 6, wherein said first viewing region and said second viewing region are non-overlapping.

11. An auto-focus method for focusing an optical arrangement of an optical system, the optical system including a head, the optical arrangement including a lens, the lens being included in the head, the optical arrangement being configured for reading from or writing to a surface of a medium, the head performing a scanning motion relative to the surface, the method comprising:

(a) illuminating at least part of a first viewing region of the surface by the optical arrangement;

(b) performing a focus range measurement of a second viewing region of the surface, said performing including sending a measurement ray through the lens, said step of configuring and said step of performing being performed substantially at the same time, wherein a centroid of said first viewing region is offset from a centroid of said second viewing region at least in a direction which is parallel to a direction of relative motion of the medium and the head;

(c) providing relative movement between the medium and the head in order for the optical arrangement to illuminate at least part of said second viewing region; and

(d) adjusting the focus of the optical arrangement based upon said focus range measurement.

12. The method of claim 11, wherein said measurement ray passes through an optical center of the lens.

13. The method of claim 11, wherein said first viewing region and said second viewing region are non-overlapping.

14. An optical system for reading from or writing to a surface of a medium, comprising:

(a) an optical arrangement and a head, said optical arrangement having a lens which is included in said head;

(b) a drive mechanism configured for providing relative movement between the medium and said head in a drive direction;

(c) an auto-focus measurement system configured to direct a measurement ray through said lens; and

(d) an auto-focus mechanical system configured to adjust the focus of said optical arrangement based upon at least one focus range measurement taken by said auto-focus measurement system, wherein:

(i) said optical arrangement and said auto-focus measurement system are configured, such that, said optical arrangement illuminates at least part of a first viewing region of the surface substantially at the same time that said auto-focus measurement system performs a focus range measurement of a second viewing region of the surface; and

(ii) a centroid of said first viewing region is offset from a centroid of said second viewing region at least in said drive direction.

15. The system of claim 14, wherein said auto-focus measurement system is configured to direct said measurement ray through an optical center of said lens.

16. The system of claim 14, wherein said first viewing region and said second viewing region are non-overlapping.